

526,353

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 March 2004 (25.03.2004)

PCT

(10) International Publication Number  
**WO 2004/024321 A1**

(51) International Patent Classification<sup>7</sup>: **B01J 29/89**,  
C07D 301/00

68526 Ladenburg (DE). **TELES, Joaquim, H.** [PT/DE];  
Reiherstr. 29a, 67166 Otterstadt (DE).

(21) International Application Number:  
PCT/EP2003/010241

(74) Agent: **HÖRSCHLER, Wolfram, J.**; Isenbruck Bösl  
Hörschler Wichmann Huhn, Theodor-Heuss-Anlage 12,  
68165 Mannheim (DE).

(22) International Filing Date:  
15 September 2003 (15.09.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,  
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10/243,669 16 September 2002 (16.09.2002) US

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **BASF**  
**AKTIENGESELLSCHAFT** [DE/DE]; 67056 Lud-  
wigshafen (DE).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **MÜLLER, Ulrich**  
[DE/DE]; Am Stecken 14a, 67435 Neustadt/Wein-  
strasse (DE). **KRUG, Georg** [DE/DE]; Eichenweg 16,  
69509 Mörlenbach (DE). **BASSLER, Peter** [DE/DE];  
Maria-Mandel-Str. 18, 68519 Viernheim (DE). **GÖBBEL,**  
**Hans-Georg** [DE/DE]; Im Mosenborn 33, 67169 Kallstadt  
(DE). **RUDOLF, Peter** [DE/DE]; Rautenthalermühle 12,

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: IMPROVED CATALYST FOR EPOXIDATION REACTIONS

(57) Abstract: The present invention relates to the manufacture of solid materials or shaped bodies containing at least one zeolite and being at least partly crystalline. Furthermore, the present invention relates to the solid materials or shaped bodies as such and to the use of these materials for reactions of compounds having at least one C-C double bond with at least one hydroperoxide. Specifically, the present invention relates to a process for the manufacture of a solid material containing at least one zeolite and being at least partly crystalline, wherein the synthesis of the said solid material involves at least one partial step of contacting at least one transition metal oxide source with at least one epoxide or hydrolysate thereof prior to or during the at least partial crystallization of said solid material.



WO 2004/024321 A1